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CONNECTIVITY EVALUATION OF PHYSICS AND MATHEMATICS IN SECONDARY SCHOOLS

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topshiriqni tugatish sanasi bilan qo‘shishi mumkin (ya’ni talabalar topshiriqni belgilangan sanadan oldin bajarishlari kerak), talabalarning faolligi va rivojlanishini kuzatib borish, baholarni belgilash.

Ta’kidlashni istagan yana bir ta’lim manbayi – www.blogspot.com blogi – bu har qanday foydalanuvchiga istalgan matnni yozib olish imkoniyatini beradigan Internet xizmati. O‘quv vositasi sifatida bloglar yaratildi: o‘quvchilarni darsda o‘rganilgan materiallar to‘g‘risida tezkor xabardor qilish, dars haqidagi ma’lumotlarni joylashtirish uchun; talabalarni chet tilidagi matnni o‘qishga rag‘batlantirish, lug‘atlardan foydalanish, shuningdek, talabalar va o‘qituvchi o‘rtasida shaxsiy aloqa o‘rnatish.

Bunday darsga tayyorgarlik haqiqiy ijodiy jarayonga aylanadi va kompyuter elementlarining yorqinligi, ko‘ngil ochishi va yangiligi boshqa uslubiy metodlar bilan birgalikda darsni qiziqarli va esda qolarli qiladi.

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УМУМИЙ ЎРТА ТАЪЛИМ МАКТАБЛАРИДА ФИЗИКА ВА МАТЕМАТИКА ФАНЛАРИДАГИ УЗВИЙЛИК ТАҲЛИЛИ

ИЗУЧЕНИЕ ВЗАИМНОЙ СВЯЗИ ФИЗИКИ И МАТЕМАТИКИ ОБЩЕОБРАЗОВАТЕЛЬНЫХ ШКОЛАХ

CONNECTIVITY EVALUATION OF PHYSICS AND MATHEMATICS IN SECONDARY SCHOOLS

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Аннотация. *Умумтаълим мактабларида физика предмети бўйича мавзуларни ўрганишда, физик қонуниятларни таҳлил қилишда математика тушунчаларидан кенг фойдаланамиз. Тарихий нуқтаи назардан олиб қарайдиган бўлсак, физика фанининг тараққиётида математика жуда катта роль ўйнаганлигини кўришимиз мумкин. Қуйида умумтаълим мактабларида физика ва математика фанларидаги мавзуларнинг узвийлиги масаласи таҳлил қилинган.*

Таянч сўзлар: *интеграция, физика, математика, кинематика, функция, координата, юза, ҳажм, босим, зичлик, пропорция, парабола.*

Аннотация. *В общеобразовательных школах для изучения, анализа физических явлений и законов мы широко воспользуемся математическими понятиями. С исторической точки зрения, как мы знаем, математика сыграла важную роль в развитии физики. В данной работе анализируется взаимосвязь между предметами физики и математики в школьных занятиях.*

Ключевые слова: *интеграция, физика, математика, кинематика, функция, координата, поверхность, объем, давление, плотность, близость, парабола.*

Abstract. *In secondary schools for the study, analysis of physical phenomena and laws, we widely use mathematical concepts. From a historical point of view, as we know, mathematics played an important role in the development of physics. This paper analyzes the relationship between the subjects of physics and mathematics in schoolwork.*

Key words: *integration, physics and mathematics, kinematics, function.*

Introduction. We use mathematical concepts in secondary schools in studying physics and analyzing the physical laws. From a historical point of view, we can see that mathematics has played a major role in development of physics. In this article we have analyzed the connectivity of physics and mathematics in secondary schools. There are many examples of interconnection between physics and mathematics. As the subject of mathematics, the coordinate line, the placement of numbers, the negative and positive or imaginative numbers concept, and using them pupils will be able to study the principles of physical instruments, for example the thermometer during the physics course. The concepts of mathematical subject enable us to easily understand the terms such as pressure, volume, temperature and density in physics. [1,18]

I. The statement of the problem. In physics courses of the secondary schools the pupils perform a lot of testing in their laboratory works. To be able to master the subject first, pupils will need to know mathematical terms, as the length, the surface, the ratio, the percentage and etc. For example, in the 6th grade physics course, mathematical concepts such as percent, proportion, inverse proportion, combinatory elements, surface and volume are commonly used in Archimedes Law laboratory works[2,73].

In the fifth class of mathematics, the definition of relation, proportion and reverse proportion is given. The mathematical course of this class contains a well-defined of surface and volume concepts. The combinatory elements are given in the 7th grade math textbook. Hence, we hope that pupils will have a higher level of apprenticeship by using these mathematical concepts in the above-mentioned laboratory training that we have learned. One of the most important forms of interaction between physics and mathematics is the solving physical tasks related to mathematical terms as such the function, equation and others. For example, in elementary grades, pupils have access to solving physical problems, ranging from ordinary homogeneity to square equations. At the same time, it is beneficial to deal with issues related to physics and mathematics.

II. The discussion of physics tasks

1. One of the most important forms of interaction between physics and mathematics is solving mathematical problems in physics. At the same time, it is helpful to solve physical and mathematical problems (fluency and intensity). Physics science mathematics arithmetic or. Not only because of algebraic expressions, but also with geometry. The shape of the objects is a square, square, circle, triangle, polygon, sphere, cube, parallelepiped with right angle, etc. may be in the multiplication. In doing so, their size is determined by the use of knowledge gained in geometry.

The continuity of physics and mathematics knowledge in general secondary schools

Table 1

Advantages	Note
Interest will be required to start the Physics course in percentages.	In the 5th grade maths textbook.
The concept of proportional ratio in the physics class is very important.	In Grade 5 proportion, inverse proportion, and proportions.
The 5th grade maths textbook should be used.	In the 7th Grade physics textbook, given the background and size of the archimedes.
The 7th Grade physics textbook gives information about speed velocity expression vectors.	In the 7th Grade geometry.
The 7th grade algebra textbook includes the subject of "Combinatorial elements" which, in its turn.	Can be used to solve the question of "how many different types of resistance can be combined"?
Mathematics lesson is 5-6 hours per week. It is as much as possible and deeper into science, which allows for consolidation.	This increases the accuracy of calculations in physics, and can not be difficult to understand.

As we know, in the mechanics section of the physics course a various mathematical functions and their graphs have to be used in solving physical tasks. For example, one of these is the simplest linear function.

2. The smooth motion with the straight line. Knowing the velocity of the smooth motion with the straight line of the material point we may calculate the path which it has traveled over a certain period of time. Thus, the vector representation of motion as can be written in the following form

$$\Delta\vec{s} = \vec{s} - \vec{s}_0 = \vec{v} \cdot (t - t_0). \qquad (1)$$

The formulae for the calculation of the path can be obtained using the condition of equality of the migration vector lengthwise within the straight line motion

$$\Delta s = s - s_0 = v \cdot (t - t_0). \qquad (2)$$

The path of the material point or object for arbitrary t moment follows from the relation (2)

$$s = s_0 + v \cdot (t - t_0), \qquad (3)$$

In our case of movement is absent at the initial time of t_0=0. Then the migration formula can represented as

$$\vec{s} = \vec{s}_0 + \vec{v} \cdot t, \qquad (4)$$

The last formula is called the equation of smooth motion of the material point with the straight line. For example, the equation (4) with the initial state s_0 = 5 m and velocity v = 2m/s can be written as the following form

$$s = 5 + 2 \cdot t$$

Table 2

Disadvantages	Note
Don't standardized form of number and apporoximate calculations.	The standard form of the subject is given in the 8th class algebra textbook.
In the 7th grade textbooks, the theme of the forces or the speeds, when opened with square rows in the path of the invaded, opens "module."	The theme of the module is presented in the 8th grade algebra
Failure to Complete the Movement in the 7th Grade Course	"The Distance Between Two Points" in the 8th Grade Geometry Tutorial
The 7th Grade physics textbook has the subject "Friction Force". Trigonometry for the expression of frictional force in the plane plane trigonometry is.	In the 9th class geometry and algebra textbooks.
The absence of Theorem theorem on the "final velocity" or "relative velocity" in the 7th grade Physics textbook is given in the Cosinus.	"Law of Cosines" is given in 9 th grade Geometry textbook.
Do not know if $h = gt^2/2$ $h = h(t^2)$ is a parabola in the theme "Effects on the power of mind" in the 7th grade Physics textbook.	The theme of "Square Function" is in the 8th class algebra textbook.
In the physics textbook of the 7th grade it is impossible to add vectors or use the Pythagoras to add or multiply the forces	The angle of the triangle, the theme of the pitapor in the 8th class geometry textbook
The 7th grade textbook gives examples of quadratic equations in the subject of quizzes.	The theme of Quadratic Equation is the 8th class algebra textbook.
The topic "Logarithmic Equations and Inequalities", which gives a logarithmic equation in the formula $N = N_0 * 2^{\frac{-t}{T}}$ on the subject of "degradation" In the 9th class atom and core is.	In the 10th class algebra.
The 9th Grade Physics textbook gives the Elementary Functions The theme of "Elementary Functions".	The 10th Grade Physics textbook gives the integral representation of the subject on the subject of"power of the day".

By using this expression, the path of the object can be found at any moment of time. It is easily to describe the above action using a table. Many of the laws in physics are based on the experiments. Let's create a table using the action equation presented in the example above. We take the numerical values for the time and corresponding to these values of s, and then we create the following table

Table 3

t, s	0	1	2	3	4	5	6	7
s=5+2t, m	5	7	9	11	13	15	17	19

In most cases, the action is to be expressed in the graph. With the help of graphics the elementary motion of the object can be represented as "visible" (Figure 1). This graphic allows us to

compare the movement of multiple objects and to identify other parameters that describe the action. [3,17]

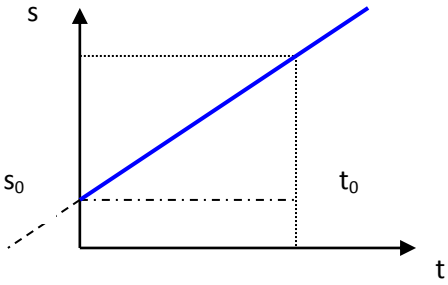

Figure 1. The graphic of change of the object road in time

The linear relationship between the path and time which we seen above is the straight line function that has been given in 6th grade math class of the secondary school

$$y = k \cdot x \qquad (5)$$

where k is the constant parameter. We know that the graph of this function is a straight line. Here we may conclude that it is possible to examine, analyze, and graphically depict the functional links of various levels of physics during the course of transition to the functions of the mathematical course.

3. In addition to the aforementioned functions, in solving physical problems, we encounter parabolic functions. For example, the movement of the material point in mechanics section of the free fall of the body, and in the energy section, the kinetic energy formulas are represented by parabolic functions. [5,176]

Physics Functional Links	***Mathematical Functions***
$h = g\frac{t^2}{2}$ $E = m\frac{v^2}{2}$	$y = a\frac{x^2}{2}$

In order to fully understand the essence of these physical phenomenon, it is best to use its graphs.

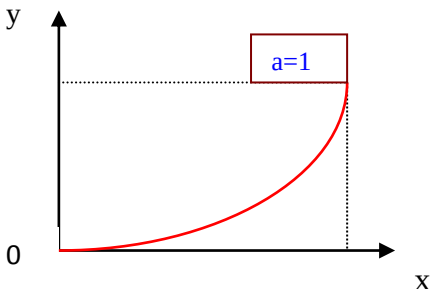

Figure 2. The graphics of the parabolic function

For example, the graph of simple parabolic function in mathematics can be seen in Figure 2. In this case, it is possible to create a graph of the function using the table, which is defined by the field of detection of the magnitudes participating in the equation, knowing the field of values. When the reader analyzes the transformation laws of this function, it can be applied freely to physics.

Summary. In summary, we believe that the mathematical issues play a crucial role in understanding physics, in particular through the use of the basic concepts and formulas of mathematics during laboratory work and solving the tasks. We hope that this may help puplis quickly and easily analyze physical topics and laws in secondary schools.

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INGLIZ TILINI O'QITISHDA TALABALARDA KOMMUNIKATIV KO'NIKMALARNI TAKOMILLASHTIRISH (FILOLOGIYA YO'NALISHI TALABALARI MISOLIDA)

РАЗВИТИЕ КОММУНИКАТИВНЫХ НАВЫКОВ В ПРЕПОДАВАНИИ АНГЛИЙСКОГО ЯЗЫКА (НА ПРИМЕРЕ СТУДЕНТОВ-ФИЛОЛОГОВ)

IMPROVEMENT OF COMMUNICATION SKILLS FOR STUDENTS IN TEACHING ENGLISH LANGUAGE (IN THE EXAMPLE OF STUDENTS PHYLOLOGY)

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Annotatsiya. *Maqolada ingliz tilini o'qitish jarayonida talabalarda kommunikativ ko'nikmalarni takomillashtirishning ahamiyati, bugungi kun zamonaviy til o'qitish talablari til ko'nikmalarini egallash bugungi kishilik jamiyatining muhim sohalardan biri ekanligi tahliliy misollar yordamida yoritilgan. Muloqot vositasi sanalmish tilni tabiiy muhit, ya'ni oilada, jamoatchilik orasida yoki darsda amaliy egallash mumkinligi, til hodisalariga oid bilimlar esa nazariy jihatdan o'rganilishini nazariy jihatdan isbotlashga harakat qilingan.*

Tayanch so'zlar: *ta'lim, tarbiya**,** kommunikativ ko'nikma, metodika, grammatika, talaffuz, tinglab tushunish, muloqot, munozara.*

Аннотация. *В статье подчеркивается важность улучшения коммуникативных навыков студентов при обучении английскому языку. Отмечается, что современные навыки преподавания современного языка являются важной областью общества. Предпринимались попытки теоретически доказать, что язык общения является естественной средой, то есть семьей, обществом или уроки, где теоретические знания о языковых явлениях усваиваются.*

Ключевые слова: *образование, преподавание, навыки общения, методология, грамматика, произношение, понимание на слух, общение, обсуждение.*

Abstract. *The article emphasizes the importance of improving the communication skills of students in teaching English, and modern teaching skills of the modern language are an important area of modern society. Attempts have been made to theoretically prove that the language of communication is a natural environment, that is, a family, society or lessons where theoretical knowledge of linguistic phenomena is learned.*

Key words: *education, teaching, communication skills, methodology, grammar, pronunciation, listening comprehension, communication, discussion.*

Kirish. Bugungi kun zamon talabi bir joyda turma, ilm o'rgan, izlan, taqqosla va yarat qabilidadir. Buning isboti o'laroq, barcha rivojlanayotgan davlatlar qatori O'zbekistonda ham ilm-fanga oid ko'plab islohotlar va izlanishlar amalga oshirilmoqda. Shulardan eng ustuvor masala sifatida ta'lim-tarbiyani takomillashtirish, o'qitishda chet el tajribasiga tayangan holda turli xildagi innovatsion metodlarni yaratish, darslarni hozirgi zamon talabasi ehtiyojlariga mos tarzda tashkillashtirish kabilarni ta'kidlab o'tishimiz mumkin.